

Team FE

Final Presentation

Virginia Tech, Blacksburg, VA, 24060



CS 5604
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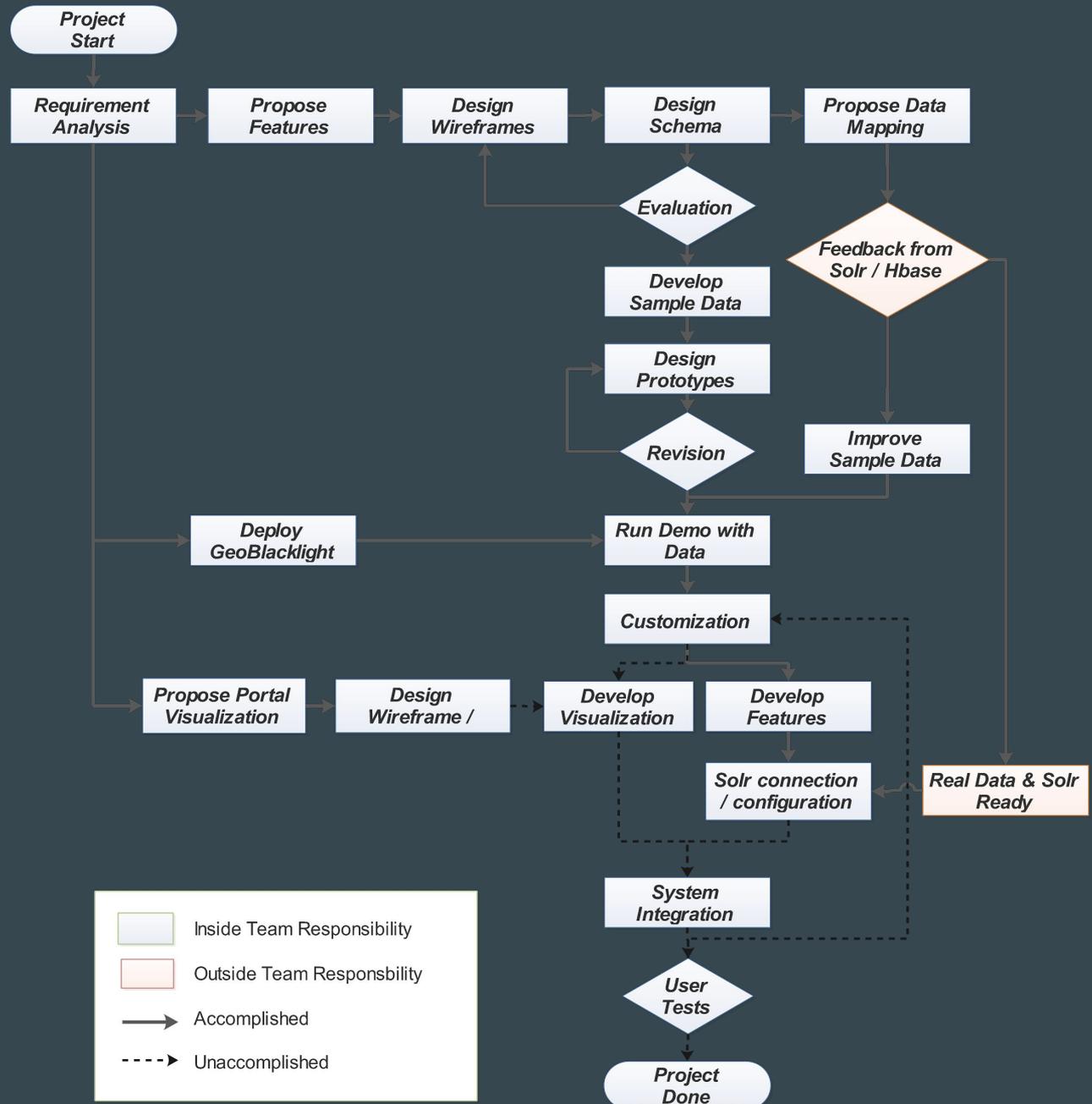
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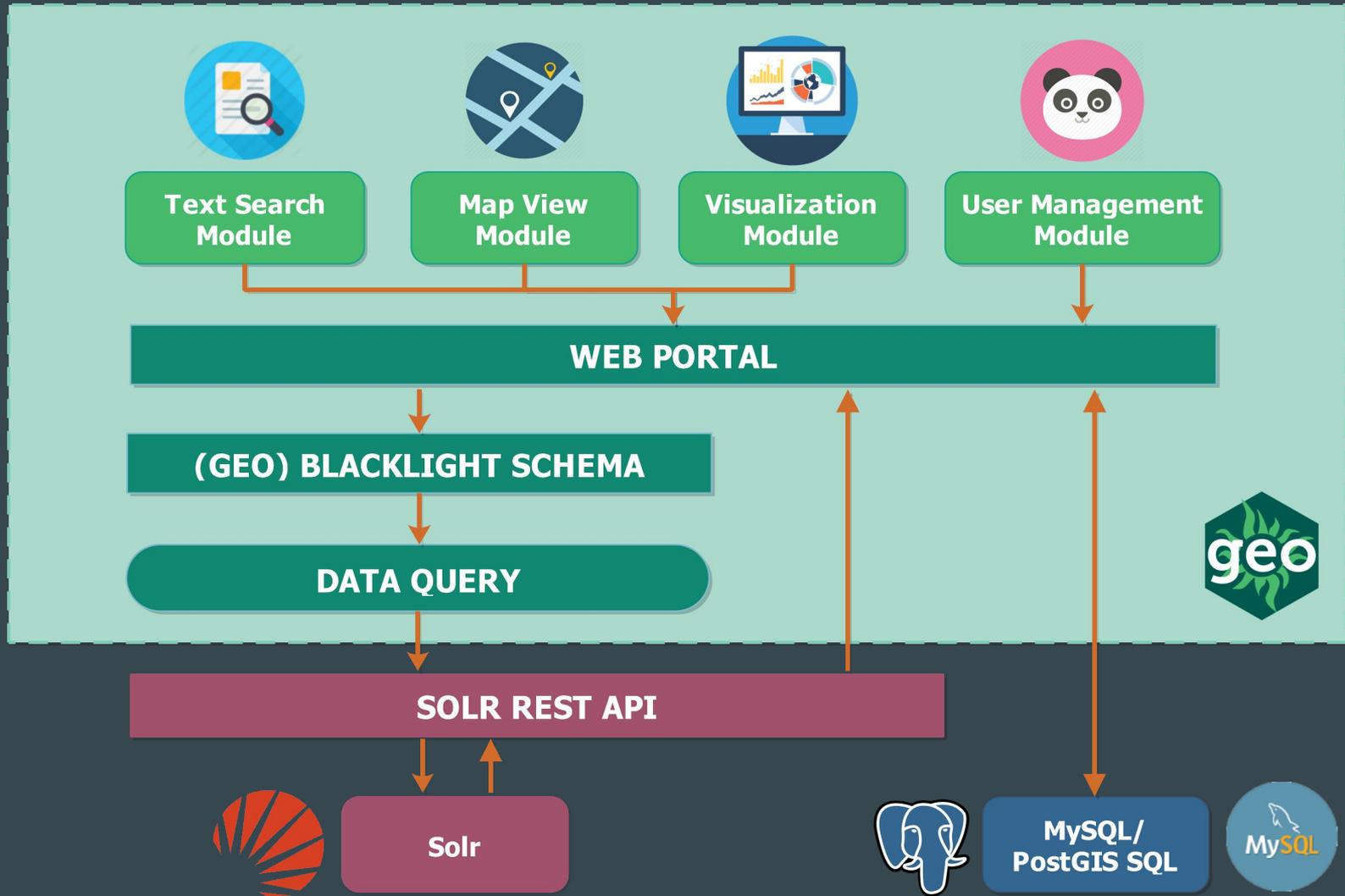
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GETAR Portal Front-end Project Workflow

(w/ GeoBlacklight)



GETAR Portal - Frontend Modules



GETAR Portal - Core Metadata

Metadata	Field	Description	Example
<i>Document ID</i>	id	Unique document identifier	899664353946996738
<i>Author</i>	dc_creator_sm	Document author	jhdee
<i>Year</i>	solr_year_i	Year when publishing the document	2017
<i>Spatial coverage</i>	dct_spatial_sm	Interpreted location as place name	Radford, virginia
<i>Institution</i>	dct_provenance_s	Institution of data collection holder	Virginia Tech
<i>Spatial bounds</i>	dct_bounds_s	Bounding box for S,W,N,E of interpreted location	ENVELOPE (34.0, -118.2, 36.5, -117.4)
<i>URL</i>	dct_url_s	URL of original documents	http://xxxx.yy.zz
<i>Full text</i>	dc_description_s	Full text of tweet / webpage	Full text
<i>Topics</i>	dc_topics_s	Related topic name	"midflight experience"
<i>Collections</i>	dct_isPartOf_sm	Related collection name	"Solar eclipse"
<i>Geometry type</i>	dc_geotype_s	Point or polygon	"point"
<i>Document type</i>	dc_format_s	Tweet or webpage	"webpage"
<i>Hashtag</i>	dct_hashtag_s	Hashtags of tweets	#solareclipse

GETAR Portal - Schema

for text search

dc_creator_sm
dc_description_s
dc_format_s
dc_identifier_s
dc_publisher_s
dc_rights_s
dc_subject_sm
dc_title_s
dct_isPartOf_sm
dct_provenance_s
dct_spatial_sm
dct_temporal_sm
layer_geom_type_s
layer_slug_s



for sorting text fields

dc_publisher_s
dc_title_s
dct_provenance_s

for spell checking

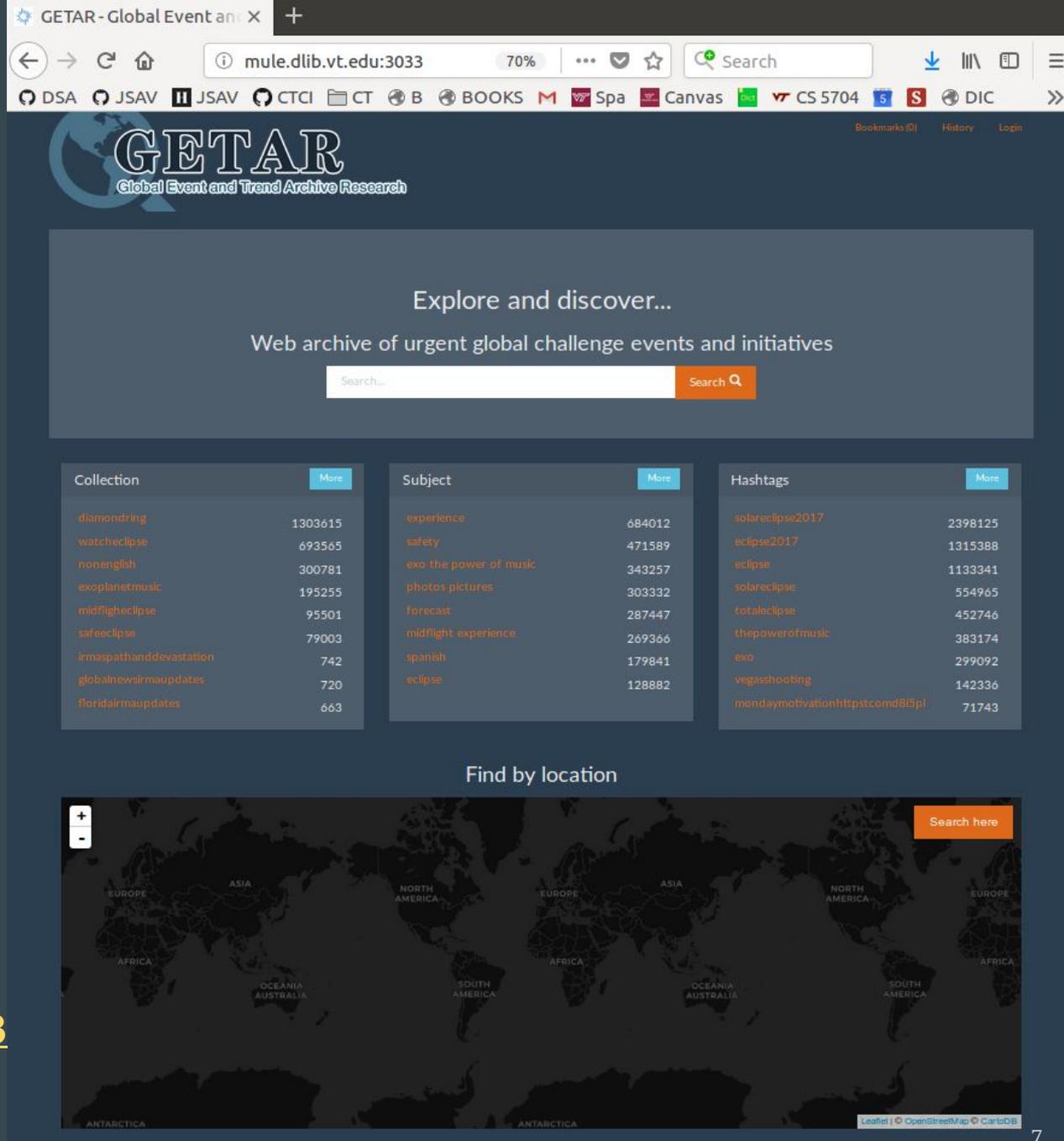
dc_creator_sm
dc_publisher_s
dc_subject_sm
dc_title_s
dct_provenance_s
dct_spatial_sm

for suggestions

dc_creator_sm
dc_publisher_s
dc_subject_sm
dc_title_s
dct_provenance_s
dct_spatial_sm

GETAR Portal - Functionality

Home Page



The screenshot shows the GETAR Portal Home Page in a browser window. The browser address bar shows the URL mule.dlib.vt.edu:3033. The page features a dark blue header with the GETAR logo and the text "Global Event and Trend Archive Research". Below the header is a large blue banner with the text "Explore and discover... Web archive of urgent global challenge events and initiatives" and a search bar. The main content area is divided into three columns: "Collection", "Subject", and "Hashtags", each with a "More" button. Below these columns is a "Find by location" section with a world map and a "Search here" button. The footer contains copyright information and links to "About GETAR", "DLRL", and "Event Archiving".

GETAR
Global Event and Trend Archive Research

Explore and discover...
Web archive of urgent global challenge events and initiatives

Search...

Collection	More
diamondring	1303615
watcheclipse	693565
nonenglish	300781
exoplanetmusic	195255
midfligheclipse	95501
safeeclipse	79003
irmaspathanddevastation	742
globalnewsairmaupdates	720
floridairmaupdates	663

Subject	More
experience	684012
safety	471589
exo the power of music	343257
photos pictures	303332
forecast	287447
midflight experience	269366
spanish	179841
eclipse	128882

Hashtags	More
solareclipse2017	2398125
eclipse2017	1315388
eclipse	1133341
solareclipse	554965
totaleclipse	452746
thepowerofmusic	383174
exo	299092
vegashooting	142336
mondaysmotivationhttpstcmd8i5pl	71743

Find by location

Search here

Leaflet | © OpenStreetMap © CartoDB

<http://mule.dlib.vt.edu:3033>

GETAR Portal- Functionality

Facet Search

All Fields Search... Search

Limit your search

You searched for: [Subject > midflight experience](#) [Collection > watcheclipse](#) [Place > Newport](#) [Start Over](#)

« Previous | 1 - 10 of 87 | Next » [Sort by time](#) [10 per page](#)

Collection	▼
watcheclipse	87
Subject	▼
midflight experience	87
Source Type	▼
tweet	87
Year	▼
2017	87
Author	>
Place	▼
Newport	87
Oregon	83

- [eflnikufsin](#)
eclipse2017 totality newport oregon photo . eflnikufsin, midflight experience, 2017.
- [gwenzaxxon](#)
eclipse2017 totality newport oregon photo . gwenzaxxon, midflight experience, 2017.
- [achswan](#)
watch solareclipse2017 newport oregon timelapse . achswan, midflight experience, 2017.
- [lisaseha](#)
eclipse2017 totality newport oregon photo . lisaseha, midflight experience, 2017.
- [bibl0cat](#)
eclipse2017 totality newport oregon photo . bibl0cat, midflight experience, 2017.
- [sharkgirl3543](#)
relive eclipse timelapse newport oregon solareclipse2017 . sharkgirl3543, midflight experience, 2017.
- [lamped24](#)

GETAR Portal- Functionality

Spatial Search

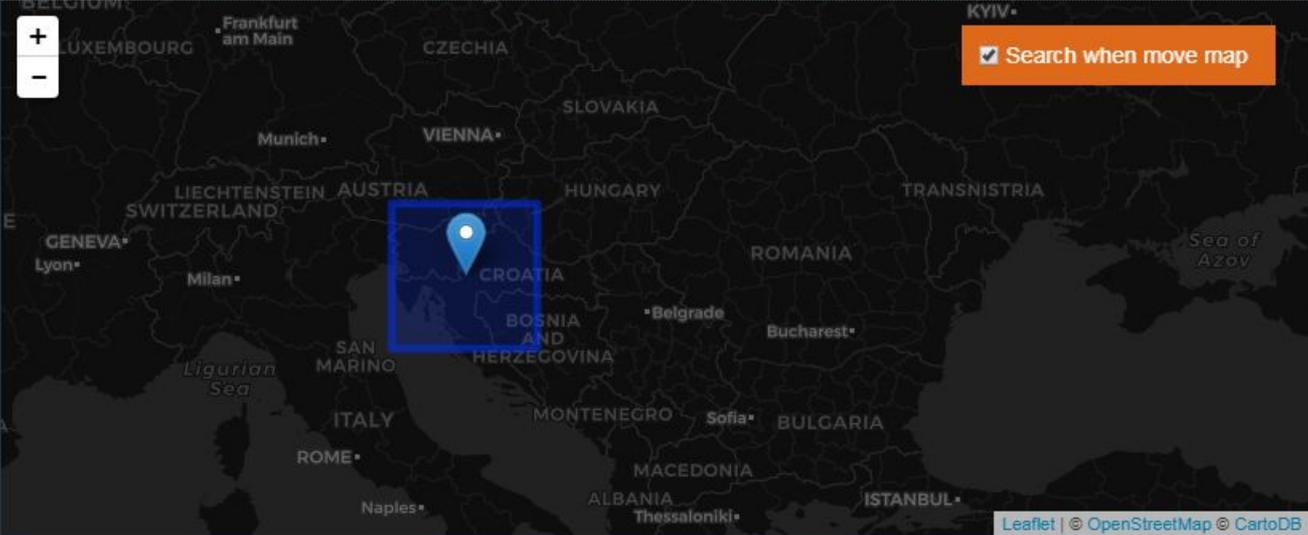
You searched for: Author > kbwinner777 ✕ Collection > diamondring ✕ Data type > Point ✕ [Start Over](#)

Bounding Box > 2.724609 40.212441 38.671875 50.652943 ✕

1 entry found [Sort by time ▾](#) [10 per page ▾](#)

1. **kbwinner777** 

eclipse mileeeeeeeeeee away slovenia thankyounature gofckyourself eclipse2017 . kbwinner777. forecast. 2017.



Leaflet | © OpenStreetMap © CartoDB

GETAR Portal - Functionality

Document Details

« Previous | 1 of 5,981,684 | Next »

[Back to Search](#)

[Start Over](#)

UnitAPI

Source Type: **tweet**

Full Text: america solar eclipse watch history solareclipse2017 .

Subject(s): **experience**

Collection: **WatchEclipse**

Author(s): **UnitAPI**

Publisher: <https://twitter.com>

Place(s): **America**

Data & Time: 2017-08-21T23:47:03Z

Hashtags: **#SolarEclipse2017**

Document URL: <https://twitter.com/UnitAPI/status/899779917046583297>



GETAR Portal - Functionality

Search History

Search History - GETAR - X

127.0.0.1:3000/search_history

Bookmarks (1) Saved Searches History Log Out whitseal@gmail.com

GETAR

Global Event and Trend Archive Research

Successfully saved your search.

Search History

Clear Search History

schoo shooting Subject:experience Data type:Point Bounding Box:-171.914062 4.390229 -28.125 53.852527	forget
schoo shooting Author:booboodip Subject:experience Data type:Point Bounding Box:-171.914062 4.390229 -28.125 53.852527	forget
solar usa view Author:booboodip Subject:experience Data type:Point Bounding Box:-171.914062 4.390229 -28.125 53.852527	save
solar usa view Author:booboodip Subject:experience Data type:Point	save
Author:booboodip Subject:experience Data type:Point	save
Author:13wmaznews Subject:experience Data type:Point	save

GETAR Portal - Functionality

User login

Log in

Email

Password

Remember me

[Sign up](#)
[Forgot your password](#)

Sign up

Email

Password (6 characters minimum)

Password confirmation

[Log in](#)



Edit User

Email

Password (leave blank if you don't want to change it)

6 characters minimum

Password confirmation

Current password (we need your current password to confirm your changes)

Cancel my account

Unhappy?

[Back](#)

GETAR Portal - Future Work

- Spatial and temporal representation visualization of data
- Integration of GETAR Portal with GETAR Visualization
- More Customization
- Performance Analysis
- Usability Testing
- Documentation for the future users/developers

GETAR Visualization

Functions:

- Search
- View Tweets
- Social Network
- User Information
- Timeline
- Keywords
- Geo-location

Cate 1 Cate 2 Cate 3

Keyword

[Attributes]

Time
#Likes
#Retweets
#Comments

From 2007 To 2017

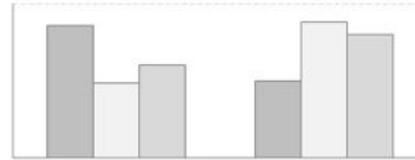
loasjd fojaweoi jdsfj oweijf
lsda jal jilkdjf oi #keyword
#oidjoe

@odasiuo sodjfolweah dsoij
osd dio ewj dao odj #keyword

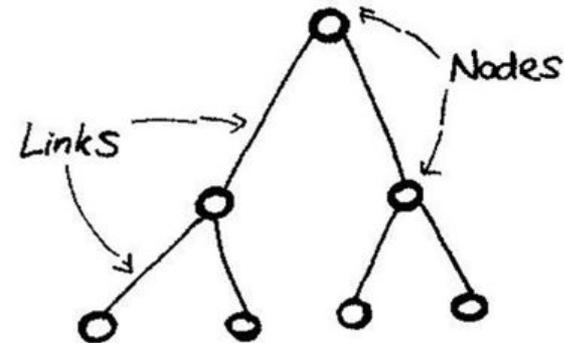
Khasdfk oiuesj dcal; jdajeo;
dsfjkj aklhcnkja h oijasdfk3k
#keyword

#keyword adjkfhak wea
oidufioaew

loasjd fojaweoi jdsfj oweijf
lsda jal #keyword
oi da e



#oidjoe #aefsdas #ewaf #cda ear

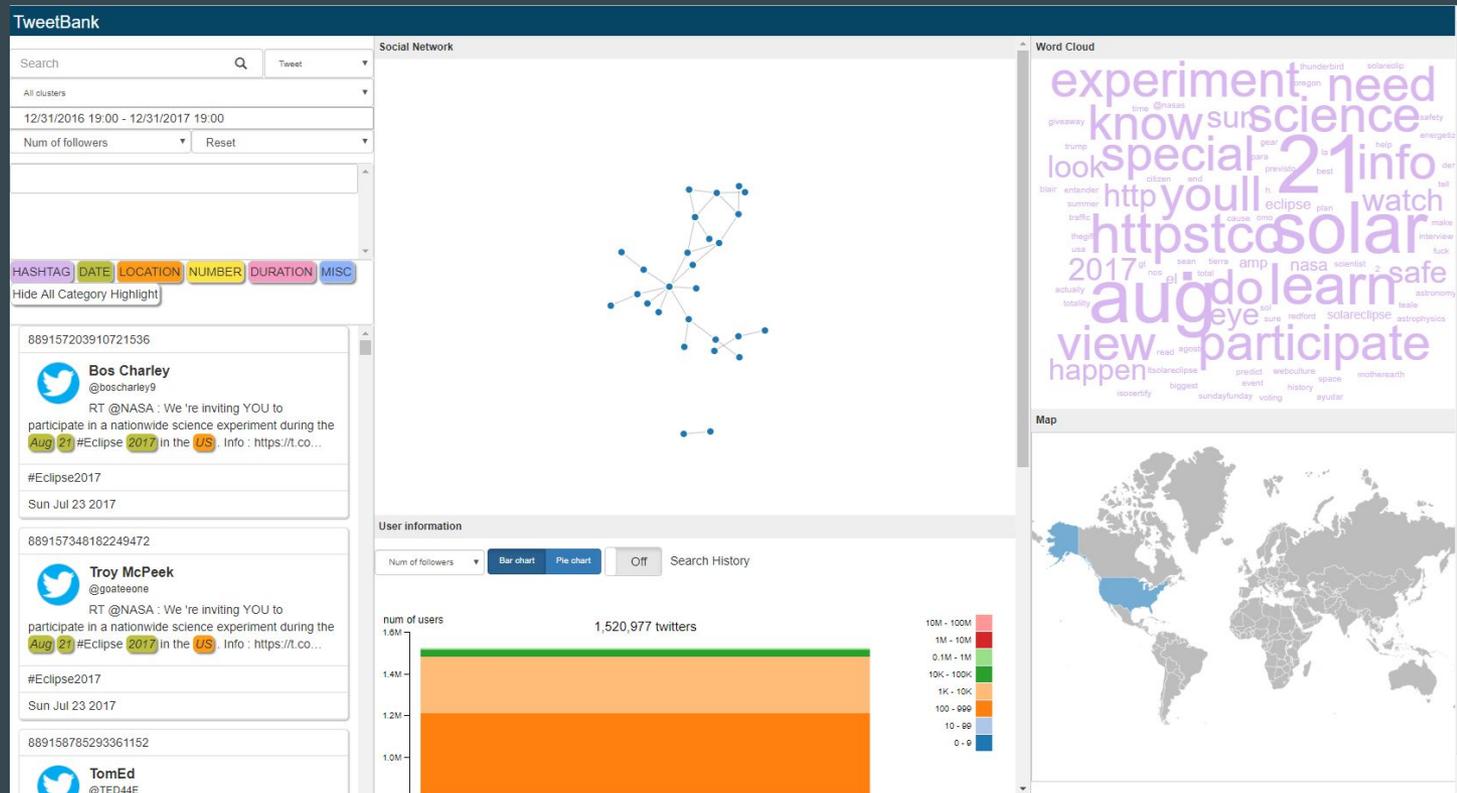


User and post graph

GETAR Visualization

Functions:

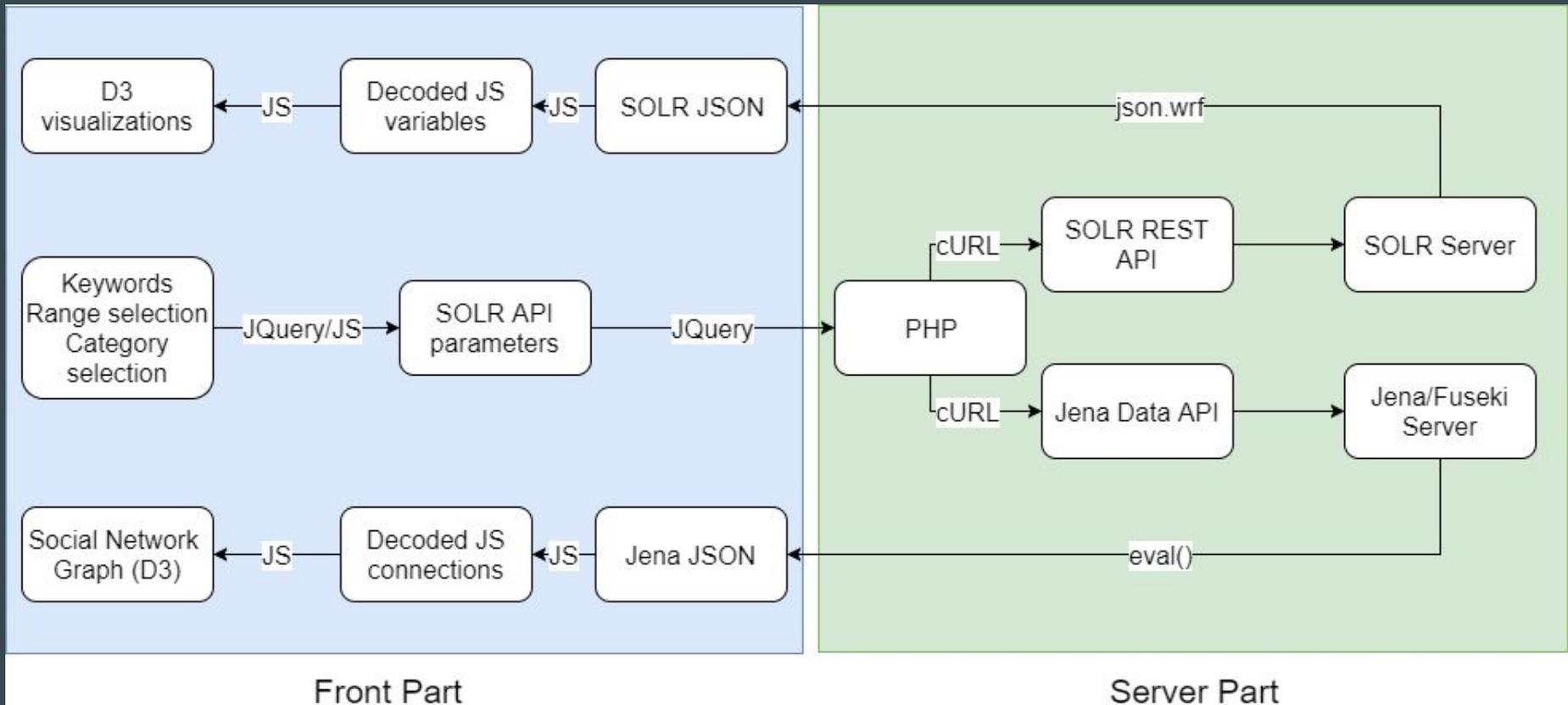
- Search
- View Tweets
- Social Network
- User Information
- Timeline
- Keywords
- Geo-location



http://mule.dlib.vt.edu/cs5604f17_fe/TweetBank/src/

GETAR Visualization - Project Framework

User input → Solr Query → PHP → Solr/Jena → JSON → Decoded Values → D3



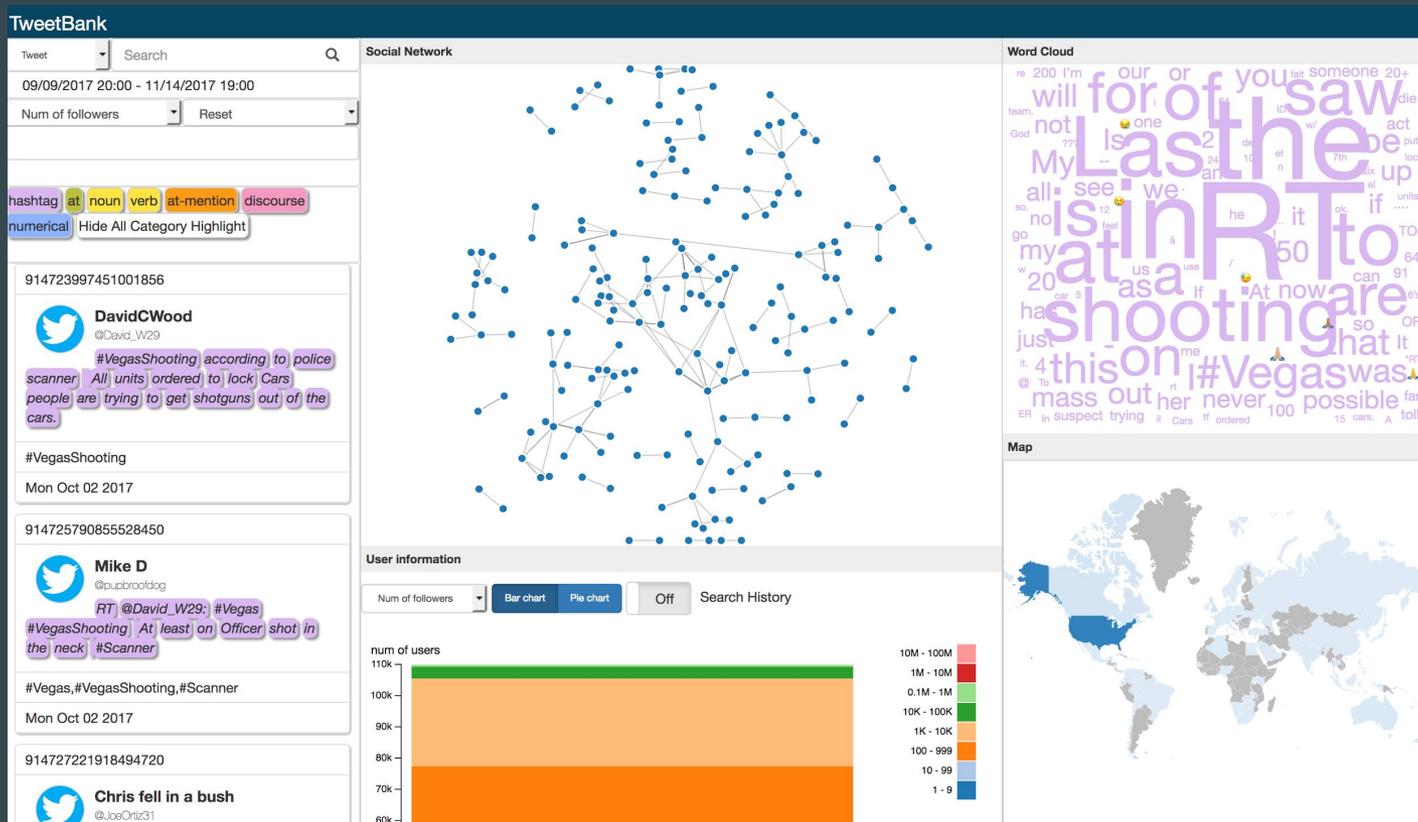
GETAR Visualization - Framework

Feature 1 - Flexible

- Easy to add new data types
- Easy to extend new views

Feature 2 - Interactive

- overview and detail
- brushing and linking
- exploratory searching



Search

Keyword:

- Single word
- Multiple words

Search fields:

- Tweet
- User name
- Hashtag

Search [Search] [Q] [Tweet] [v]

DiamondRing [v]

12/31/2016 19:00 - 12/31/2017 19:00

Num of friends [v] 100 TO 999 [v]

Cluster:

- DiamondRing
- WatchEclipse
- NoEnglish
- ...

Time range

User info

- Follower #
- Friends #
- Tweet #
- Favorite #
- User lang

User info range:

- 0-10
- 10-100
- 1000-10000
- ...

GETAR Visualization

- Views: TweetList

1. Embed all tweet metadata (Query from SOLR Team)
 - a. UTF-8
 - b. Links
 - c. Emoji
2. Highlighted with keywords (NER, POS from Tweet Team)
 - a. HASHTAG
 - b. Place
 - c. Organization
 - d. Time
 - e. Number
3. Interactions:
 - a. Search and highlight, rerank
 - b. Search and update tag cloud
 - c. highlight/unhighlight

914732206718947328



Scrambull

@Scrambu11

RT @David_W29: #Vegas
#VegasShooting Officer Transporting 5 critical
injured in his patrol car to ER

#Vegas,#VegasShooting

Mon Oct 02 2017

914732720957227009



Ganjdre

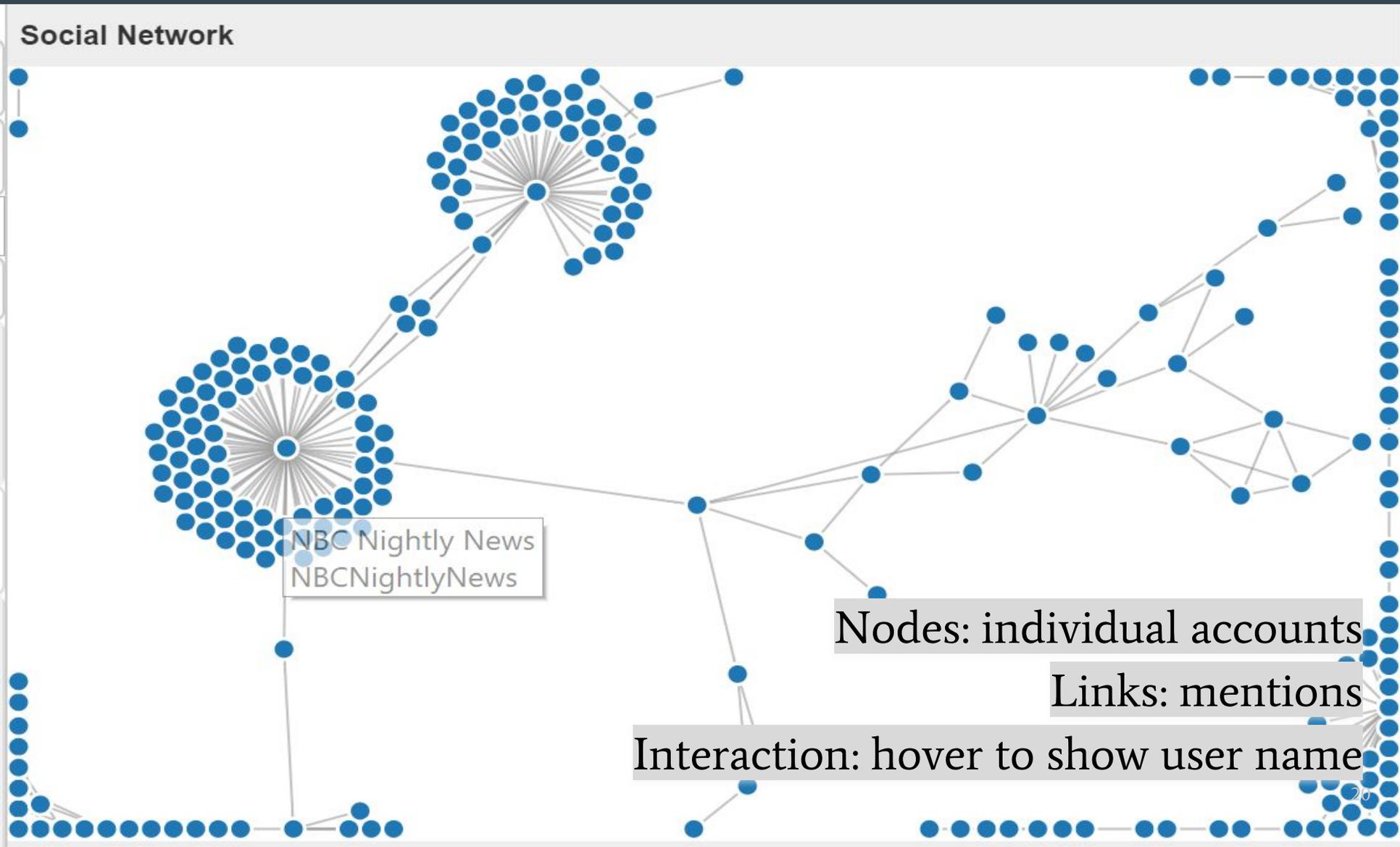
@andrenotlaw

RT @David_W29: #VegasShooting
according to police scanner 2 shooters fully
automatic weapons Mandalay Bay

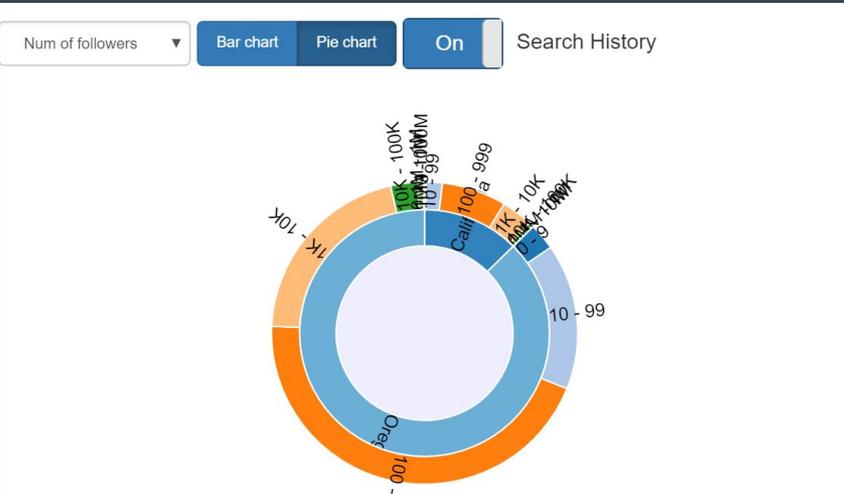
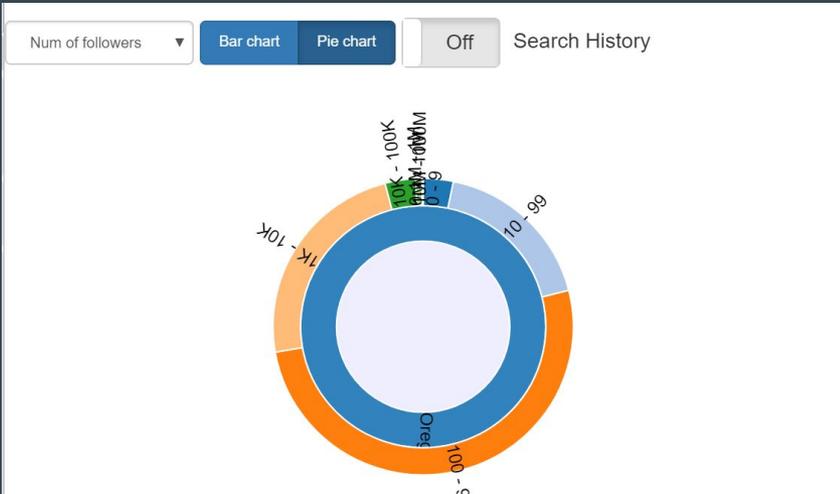
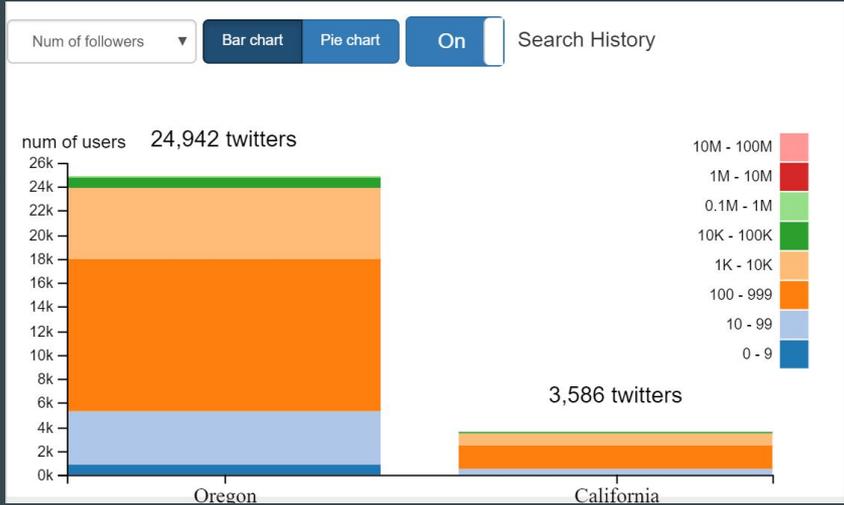
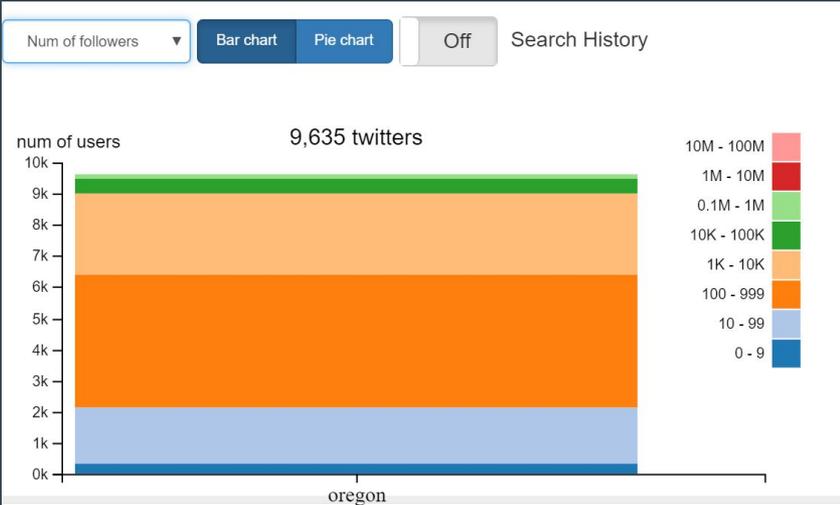
#VegasShooting

Mon Oct 02 2017

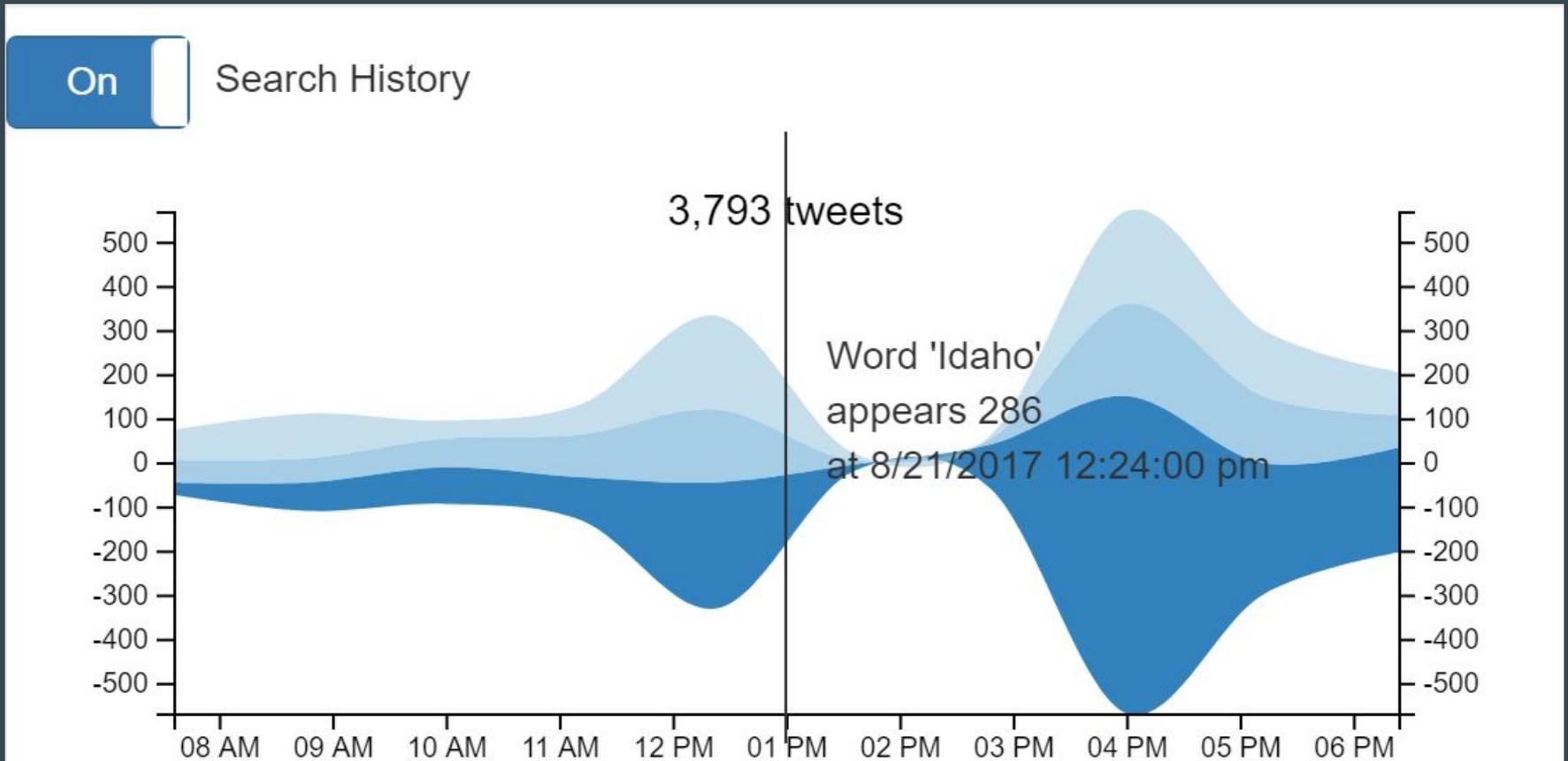
GETAR Visualization - Social Network



GETAR Visualization - User information



Timeline



Visualization Views - Tag Cloud

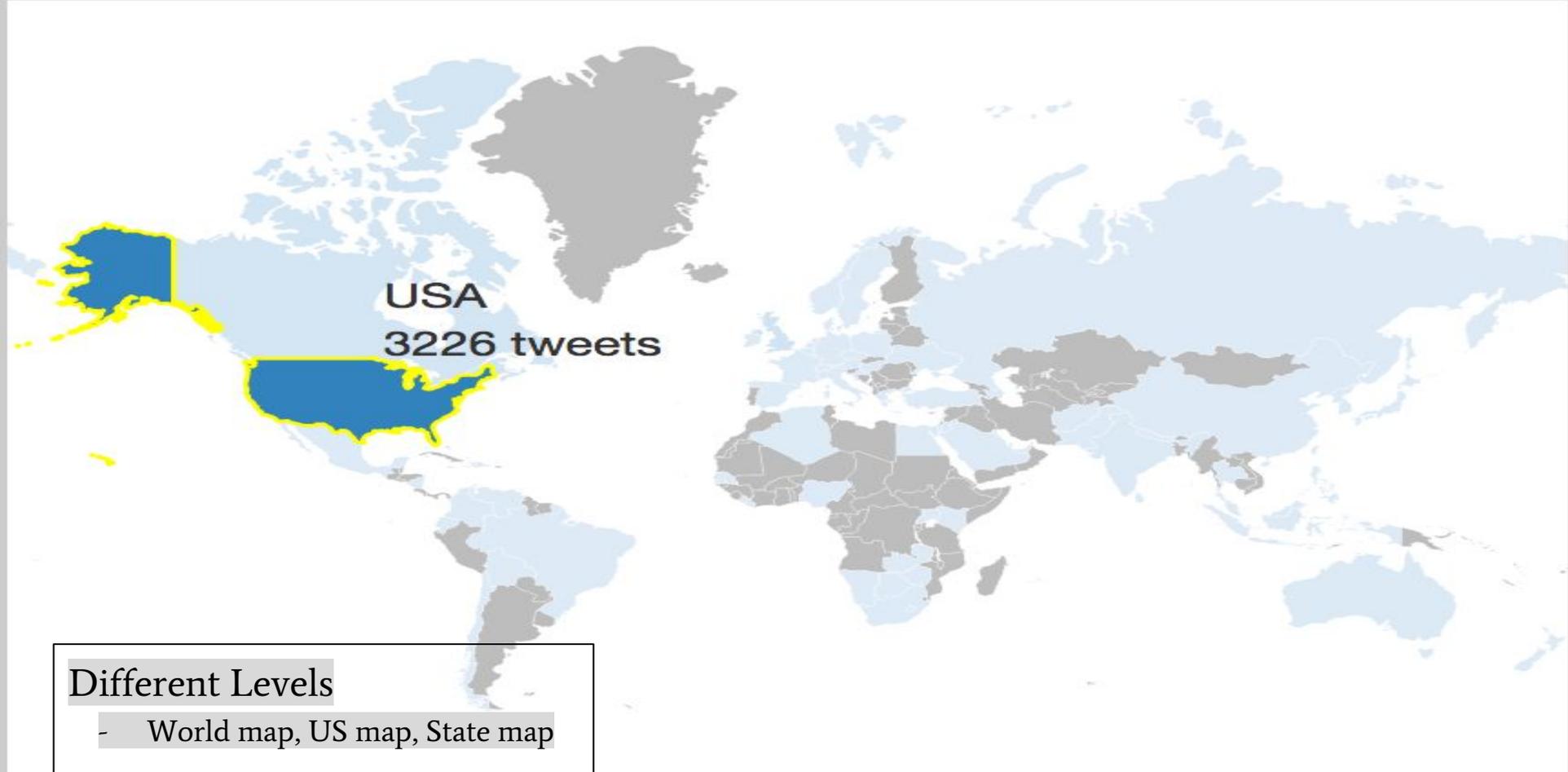
D3-cloud: tag cloud generator for D3.js

1. Dynamic Update through Interactions
 - a. Summarization of current search results.
 - b. Help users narrow down tweet list
 - c. Exploratory search
2. Generalization and Emotional Expression
 - a. Key Words from POS/NER
 - b. Emoji
3. Interaction Reaction
 - a. Searching: update based on tweet-list
 - b. Highlight: update based on filtered tweet-list



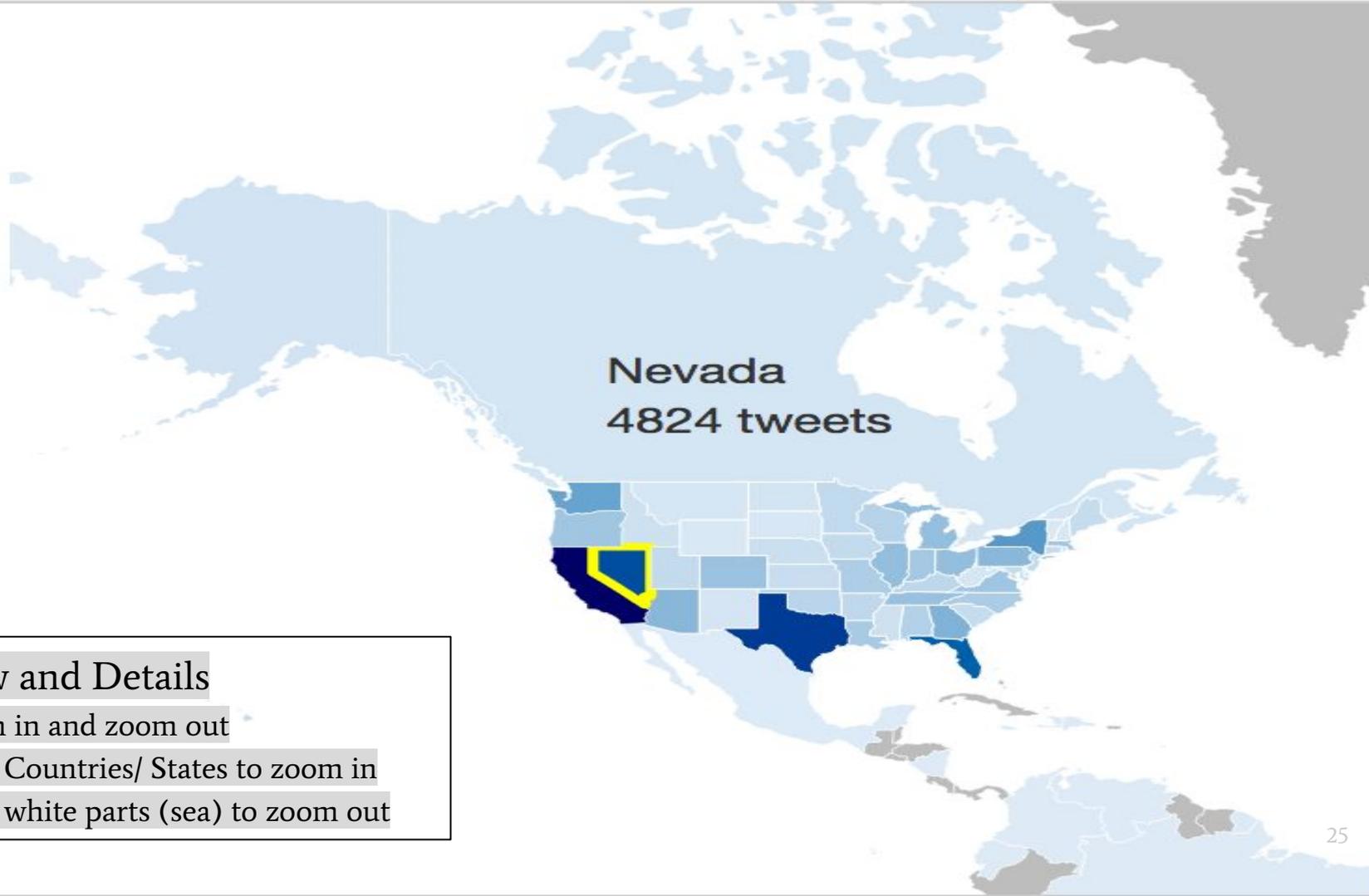
Visualization Views - Geo Map 1

Map



Visualization Views - Geo Map 2

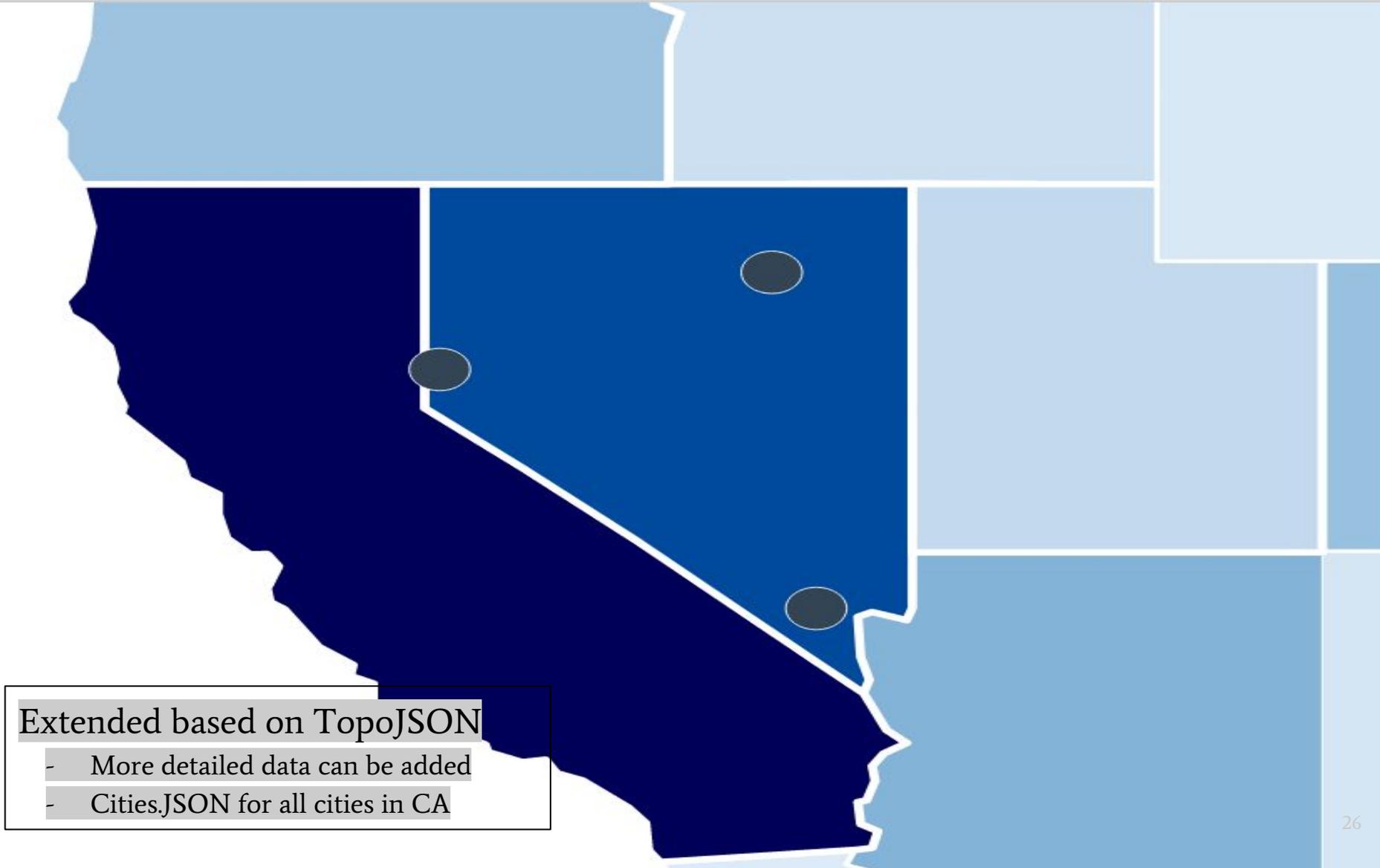
Map



Overview and Details

- Zoom in and zoom out
- Click Countries/ States to zoom in
- Click white parts (sea) to zoom out

Visualization Views - Geo Map 3



QUESTIONS?

Thanks go to the US National Science Foundation for supporting Global Event and Trend Archive Research (GETAR) through IIS-1619028.

Thank you!